



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/924,730 | 08/08/2001 | Paul A. Kline | CRNT-0011 | 3963 |

7590 10/23/2002

Woodcock Washburn Kurtz
Mackiewicz & Norris LLP
46th Floor
One Liberty Place
Philadelphia, PA 19103

EXAMINER

PREVIL, DANIEL

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2632

DATE MAILED: 10/23/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,730

Applicant(s)

KLINE, PAUL A.

Examiner

Daniel Previl

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Warnagiris et al. (US 4,697,166).

Regarding claim 1, Warnagiris inducing an alternating current (AC) voltage from the power line (AC power line by providing a coupling system which has a single line coupling network) (fig. 2; col. 2, lines 19-26); powering a transceiver device with the induced AC voltage (coupling circuit 22 for connecting a transceiver to a power line) (col. 3, lines 29-30); communicating the signal with the transceiver via a power line (signals transmit signals onto the line) (col. 3, lines 29-36).

Regarding claims 2, 4, Warnagiris teaches the step of transmitting the signal to an end user via the transceiver device (col. 1, lines 23-36).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warnagiris (US 4,697,166) in view of Abraham (US 6,014,386).

Regarding claims 3, 5, Warnagiris discloses all the limitations in claim 1 but fails to disclose a fiber optic link.

However, Abraham discloses a fiber optic (col. 3, lines 14-16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Abraham in Warnagiris. Doing so would deliver accurately clearer signals and fiber optic is less expensive for inter home or building use.

Regarding claims 6, 7, Warnagiris discloses the step of filtering the induced AC voltage (fig. 3).

4. Claims 8-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abraham (US 6,014,386) in view of Max et al. (US 4,683,450).

Regarding claim 8, Abraham one ferrite core located on an outer insulator of the power line for increasing an inductance of the power line (fig. 19; col. 5, lines 47-56; col. 6, lines 52-61; col. 10, lines 17-21); a transformer device located

on an insulator of the power line for inducing an AC voltage from the power line (col. 9, lines 32-49); a transceiver that receives power from the transformer device (col. 6, lines 18-45).

Abraham discloses every feature of the claimed invention but fails to explicitly disclose a conductor external to the center conductor.

However, Max et al discloses a conductor external to the center conductor (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Max in Abraham. Doing so would increase the noise protection filter and would allow an electrical current to pass without notable attenuation.

Regarding claim 9, Abraham discloses a ferrite core, transformer device and transceiver device (col. 5, lines 47-55; col. 6, lines 18-39).

Regarding claims 10, 14, Abraham discloses air gap in the outer insulator of the power line (col. 6, lines 18-31).

Regarding claim 11, Abraham discloses a ground potential (col. 18, lines 1-15).

Regarding claim 12, Abraham discloses a current transformer (col. 17, lines 52-64).

Regarding claim 13, Abraham discloses fiber optic (col. 3, lines 13-18).

Art Unit: 2632

Regarding claim 15, Abraham discloses AC to DC power (col. 16, lines 28-31).

Regarding claims 16-17, Abraham discloses filter 74 (fig. 3, ref. 74).

Regarding claims 18, 24, Abraham discloses the step of removing a portion of an outer insulator of the high-voltage coaxial cable (the size of the gap is selected to reduce inductive loading from coupler secondary to the primary) (col. 6, lines 18-25); coupling communication device to the remove portion of the high voltage coaxial cable (col. 6, lines 26-45; col. 1, lines 48-60); inducing voltage of the high voltage coaxial cable and providing the induced voltage to power the communication device (fig. 19-21; col. 6, lines 18-45; col. 3, lines 12-34).

Abraham fails to disclose a center conductor.

However, Max et al discloses a center conductor (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Max in Abraham. Doing so would increase the noise protection filter and would allow an electrical current to pass without notable attenuation.

Regarding claim 19, Abraham discloses an outer insulator (fig. 19-21).

Regarding claims 20, 21, Abraham discloses adjust inductance value (col. 12, lines 46-47).

Regarding claim 22, Abraham discloses adjusting signal provided by the communication device (col. 12, lines 45-53).

Regarding claim 23, Abraham discloses voltage amplitude (col. 7, lines 13-14).

5. Claims 25-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Max et al. in view of Abraham.

Regarding claims 25, 35, 36, Max disclosing the step of inducing voltage from the center conductor (fig. 1; col. 2, lines 64-67); communicating data signal from the outer conductor (fig. 1; col. 2, lines 52-63).

Max fails to provide the step of providing power to the transceiver.

However, Abraham discloses power line with the transceiver (col. 6, lines 13-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Abraham in Max. Doing so would allow the power line to communicate with external services with a clearer signal and less expensive for the customers.

Regarding claims 26-28, 38, 39-40, Max discloses an outer conductor (fig. 1).

Art Unit: 2632

Regarding claims 29-30, 41-42, the above combination discloses all the limitations in claim 25 and Abraham further discloses customer premise and telephone (col. 1, lines 62-66). Same motivation as claim 25.

Regarding claims 31, 43, the above combination discloses all the limitations in claim 25 and Abraham further discloses a fiber optic (col. 3, line 14).

Regarding claims 32, 37, the above combination discloses all the limitations in claim 25 and Abraham further discloses a direct current voltage (col. 7, lines 26-28). Same motivation as above.

Regarding claims 33, 44, although, the above limitation discloses all the limitations above but fails to specify a range of 120 volts to 15 kilovolts. Since, Abraham discloses a direct current (col. 7, lines 27-28). It is obvious for any skill artisan at the time the invention was made to use any voltage range to transmit accurately signals at both ends of the line.

Regarding claims 34, 45, the above combination discloses all the limitations in claim 25 and Abraham further discloses a ferrite core (col. 6, line 60).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sanderson (US 6,040,759) discloses a communication system for providing broadband data services using a high-voltage cable of a power system.

Enge (US 3,605,009) disclosed a stabilized power supply.

Mansfield, Jr. et al. discloses an highly reliable power line communications system.

Morava (US 5,616,969) discloses a power distribution system having substantially zero electromagnetic field radiation.

Merwin et al. (US 5,691,691) discloses a power line communication system using pulse transmission on the AC line.

Sutterlin et al. (US 5,148,144) discloses a data communication network providing power and message information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on 308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

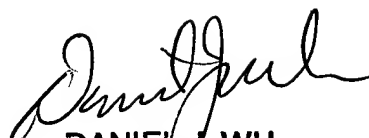
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-4700.

Application/Control Number: 09/924,730
Art Unit: 2632

Page 9

Daniel Previl
Examiner
Art Unit 2632

DP
October 20, 2002


DANIEL J. WU
Primary Examiner
10/24/02